



Similar problems are experienced in Kunene:

“Conservancies look after the elephants but when problems arise MET have the authority. When one of our elephants was causing a lot of problems including chasing people, we wrote a letter to MET asking them to declare it a problem animal. They refused.” (≠Khoadi //Hôas Conservancy Committee member)

“When an elephant dies the MET comes with a lot of cars, but if someone is killed by an elephant no one comes.” (≠Khoadi //Hôas Conservancy Committee member)

In ≠Khoadi //Hôas, as in Salambala, there is also a growing gap between what the conservancy is expected to do and what it can legally do. The main problems come from elephants that damage water points, but MET has retained all decision-making authority concerning elephants. However, MET has little capacity to deal with elephant problems (although it does provide diesel to pump water at water points frequented by elephants) which means that the institution that claims authority over the elephants is ultimately unable to deal adequately with the problems caused by them.

In short, the conservancies have the responsibility to deal with HWC but no authority, and MET has the authority but limited capacity.

### Reducing competition between wildlife and livestock

Chapter 5 emphasised the importance of livestock farming as a key livestock strategy for conservancy residents in Caprivi and Kunene Regions. In Caprivi residents have a broader range of livelihood strategies because of climatic and ecological circumstances (for example, higher rainfall and consequently crop production) and their proximity to major rivers and seasonal wetlands). In Kunene Region livestock farming is the most important livelihood strategy for most residents. It is also one of the driest areas of the country and one of the most prone to drought. Wildlife numbers are generally accepted to have increased considerably in the north-west over the past 10 or more years (C. Brown pers. comm., G. Stuart-Hill pers. comm.) and there are an estimated 100,000 springbok in the Kunene conservancies. In times of drought the increased numbers of wildlife will compete with livestock for grazing and browse. There is an expectation among some conservancy members that the conservancy will be better able to manage this competition. A committee member of the Torra Conservancy in Kunene Region explained that gaining rights over wildlife meant that the community could now manage its livestock properly (B. Roman pers. comm., cited in Jones 2002). In the past, the community could reduce its livestock holding, but not its wildlife. Now they would be able to

achieve a balance between the two (see also Seslar Svendsen *et al.* 2000).

However, conservancies do not have the authority to do much in this regard (Jones 2002). They may not take measures to reduce some of the potentially competing species such as Hartmann’s mountain zebra without first applying for a permit. Even if conservancies wanted to reduce numbers of huntable game such as springbok, oryx and kudu, they could only do so for own use. If they wanted to reduce numbers in any way that involved commercial use (for example, live capture and sale) they would have to obtain a permit. Under current legislation conservancies could also apply to MET for a special permit to reduce wildlife numbers because of drought. One official in Caprivi said that, in these circumstances, a biologist would be sent to assess the carrying capacity of the land, grazing and water availability and he or she would make a recommendation. This is another area of wildlife management (indeed of rangeland management) over which local residents do not have real control even if they form a conservancy. Policy and legislation need to give conservancies the right to take the management decisions they think appropriate without having to gain government permission. Integrated approaches to NRM cannot be promoted effectively if crucial areas of decision-making over resources that affect others are denied to people.

### Enabling legislation to destroy wildlife that is threatening human life or property

In life-threatening situations, government legislation does not prohibit people from protecting themselves or their livestock from harm by all wild animals, including specially protected species such as elephants. With regard to specially protected species, the legislation stipulates that “no provision contained in this section shall prohibit the owner or lessee of land or the occupier of communal land from killing specially protected game on such land in defence of human life or to prevent human life from being injured or to protect the life of any livestock, poultry or domestic animal of such owner, lessee or occupier while the life of such livestock, poultry or domestic animal is actually being threatened” (GRN 1975a). Any person killing a specially protected species in defence of life must report the incident in writing to the nearest MET office or police station within 10 days, or they shall be guilty of an offence (GRN 1975b).

Apart from life-threatening situations, Subsection 37 of the Nature Conservation Ordinance of 1975 (No. 4) allows communal area residents to control, through hunting, any game except specially protected species, which are “destroying or damaging crops or plants”, on the condition that “such cultivated land is enclosed with a fence approved by the Director”<sup>14</sup> (GRN 1975c).

<sup>14</sup> In practice, communal area residents are not allowed to enclose land and this reference is interpreted to include fences built, for example, from thorn branches or wooden poles and may therefore refer to a kraal (Ben Beytell, pers. comm.).



### Difficulties in implementing the legislation

Jones (2002) highlights some practical difficulties with the existing situation and the impact this has on rural livelihoods. He notes that many rural households cannot afford firearms and ammunition to protect themselves and their property against wildlife. Regarding elephant damage to crops, Jones reports, "Although conservancies can use armed game guards to try to scare elephants away, they are unable to take the ultimate sanction against a problem elephant and kill it." (This contrasts with the legal situation in Botswana where a citizen can kill an elephant that is causing crop damage.) He goes on to describe MET's "lengthy process of decision-making before an elephant can be declared a problem animal and shot by the Government or a trophy hunter". The MET Minister needs to give his or her approval but, before this, "a villager in Caprivi might have to find transport to travel up to 100 km to report the elephant problem in Katima Mulilo. The head of the MET office in Katima has to contact the regional head in Rundu. The regional head has to find a deputy director or director in Windhoek, who then channels the request via the Permanent Secretary to the Minister". If approval is obtained, the decision has to be relayed back through the same chain of command, by which time the elephant may have left the area or even moved to a neighbouring country (Jones, 2002). The time-consuming nature of this approval process was also noted at a national workshop held to find ways to reduce the conflict between people and wildlife (refer to Murphy (2001) for workshop proceedings).

### Recording incidences reported by complainants

In Caprivi and Kunene, CGGs (also known as Community Rangers or Environmental Shepherds) resident in conservancies have been collecting information on HWC incidents as part of their work for sometime<sup>15</sup>. The CGGs recording procedure was customised in the event book system in 1999/2000 by the CGGs in Caprivi, with the facilitation of staff from IRDNC and the Natural Resource Working Group of NACSO (previously known as the WWF-LIFE Natural Resources Team), as the existing recording system was unsatisfactory and information was not readily accessible to conservancies (Stuart-Hill 2003 and Stuart-Hill *et al.* 2003). Since 2001, CGGs in many of the conservancies in Caprivi and Kunene have used the event book system. The simple graphic recording systems have allowed them to feed back information to their communities and other interested parties<sup>16</sup> and have a strong sense of ownership over the data. In addition, annual audits were undertaken in 2001 and 2002. The 2001 data was

computerised by WWF staff for analysis and summaries were produced.

MET staff in Caprivi have collected information on incidents of HWC since 1991. A separate pro forma record sheet is completed by field staff for each reported incident. These sheets are retained at the regional head offices and are used by senior staff when writing reports about HWC. They are not captured electronically. MET staff members have recently had some initial training in a system similar to the CGGs' event books, which should improve the use and quality of HWC records.

As well as recording HWC incidents, CGGs are active in HWC prevention and access the support of MET staff were possible. The CGGs conduct 'Problem Animal Control awareness programmes' within the conservancies (which include, for example, helping to build strong kraals to prevent livestock losses); warn farmers of the presence of wild animals; assist with chasing animals out of fields/gardens; and hunt identified 'problem animal' species.

### Game Product Trust Fund

The GPTF is an initiative of MET set up to fund projects that will reduce the conflict between people and wildlife. The GPTF receives revenues from the sale of animal products such as skins and ivory; the sale of trophy hunting concessions and donations from other sources. So far a number of projects have been funded by the GPTF in Kunene<sup>17</sup>. No projects to date have been funded in Caprivi despite this region having the highest incidence of HWC in Namibia.

### Exploring the option of zonation

Some conservancies are exploring the option of zonation to assist in addressing the HWC from a spatial dimension, and at the same time serving the tourism need for areas that require a reduction or exclusion of some livelihood activities such as grazing and cropping. For example, Kwandu Conservancy Committee and members have given thought to some land-use planning whereby people can leave areas free for wildlife to use (along the Kwando River and some corridors from the river to the neighbouring state forest). Other conservancies have identified core wildlife areas to be used for conservation and tourism.

### Fencing and dams

In Kunene, some gardens are being protected by electric fences. Discussions were held with conservancy staff, people

<sup>15</sup> Since the inauguration of the CGG project in 1991 in Caprivi (Rice 1997; Murphy and Mulonga 2002), although to date the early information from CRs has not been systematically collated, analysed and reported.

<sup>16</sup> For example, in July 2002 at the official launching ceremony of Kwandu Conservancy, CGGs gave a presentation of the wildlife monitoring to invited dignitaries, including the Deputy Minister of MET.

<sup>17</sup> For example, 'Reducing elephant-human conflicts in the #Khoadi //Hôas Conservancy', 'Assessment of elephant damage to water installations at Onameme, Omusati Region and provision of immediate relief to the problem', and 'Minimising of elephant-human conflict over water in Nyae Nyae Conservancy'.



at homesteads and people with gardens. Key factors relating to the effectiveness of the fences were recorded as the extent to which local people are responsible for the maintenance and upkeep of fences; keeping plants off the wires; and ensuring that poles are in good condition. At one garden at a conservancy chairman's home the fence has been working effectively for four years; however, when questioned about major maintenance requirements the chairman stated that they were still the responsibility of IRDNC and the conservancy, and then himself (Vaughan *et al.* forthcoming). At the electric fence installation in Okongundumba Conservancy, IRDNC had trained two local men to monitor the fence voltage using a voltmeter and to maintain the fence. Women were particularly vocal about the need to protect gardens, reflecting the gendered nature of garden production systems.

In Okongundumba Conservancy, the household gardens were reorganised and located at one collective site. This enabled them all to be protected by a single electric fence. The fence was erected by local people using wooden poles and consisted of three strands or protective wire. Reportedly it was 2 km in circumference! A note of caution was highlighted by one elderly man of the Okongundumba community who said,

*"Now we have all our 11 gardens in one place instead of spread around, this is a good thing but if the elephants come everybody can lose everything instead of just one or two households losing their gardens."* (Vaughan *et al.* forthcoming)

Other residents expressed their concern about elephants' ability to pull over the poles or to force their way inside the fence and once inside wreak havoc. In addition poles were susceptible to termite damage and metal poles were thought to be too costly.

The installation and maintenance of electric fencing can be costly. Approximations of the cost per kilometre for Caprivi, for example, were N\$7,632. If the fences are installed correctly and well maintained they can be effective for at least a limited period. They may not prove to be effective against all wildlife, however, as different design and construction requirements need to be met for different animals. A fence that is effective against hippo or elephant may not be effective against smaller species (bushpig or porcupine for example) (Evans 2003).

In the north-west, strengthening water points against elephant damage and building installations specifically for elephants has been one strategy that has been employed for around 15 or more years. The results of these installations

have been mixed. It is widely known that elephants prefer clean water sources, and dams that are especially constructed for elephants require maintenance to ensure they remain favourable to elephants. If they are poorly maintained elephants will revert to using and damaging domestic and livestock water points. Maintaining local community interest in these installations is central to their long-term success (Vaughan *et al.* forthcoming).

### Pilot compensation scheme

With the assistance of donor funding through IRDNC, four conservancies (two in Kunene and two in Caprivi) are running a pilot compensation scheme for losses to livestock (up to N\$800 for a cow for legitimate livestock claims) and N\$5,000 for funeral expenses in cases of loss of human life. Research is being done to see how this scheme could be extended to crop losses<sup>18</sup>. But for now money will only be paid for livestock loss and only if the cattle and goats are looked after well – herded during the day and kraaled at night. From a livelihoods perspective, this scheme has great merit, as it aims to provide direct financial compensation to individual households which have borne direct costs of HWC. The extension of the scheme to include compensation for crop losses was identified as the strategy of choice by the majority of those involved in Evans research (2003). However, the effectiveness of the compensation scheme piloted for livestock remains to be seen. Strict control on the verification of claims will be needed, as well as implementation of the necessary precautions to reduce the threat of HWC (e.g. kraaling cattle at night). Evidence from elsewhere indicates that for compensation schemes to be successful they need to adhere to the following core elements:

- Quick and accurate verification of the damage
- Prompt and fair payment
- Sufficient and sustainable funds
- Shared ownership of scheme
- Clear rules and guidelines
- Appropriate measures of success

(After Nyhus *et al.* 2003)

## Conclusions and Recommendations

This chapter focused on issues associated with HWC and livelihoods, and current efforts to mitigate HWC. The impact of HWC on livelihoods has a variety of impacts and people incur a number of different costs (direct and indirect). These contribute to household vulnerability. This is particularly the case among poorer households with fewer resources. The impact of HWC on conservancies is also significant.

<sup>18</sup> As insecure households, especially in Caprivi, tend not to own livestock and depend on their crops for food, the pilot scheme in Caprivi would have greater impact if crop damage were included. At present, the pilot scheme covers loss of livestock only.



Rural people and MET report an increase in wildlife numbers, resulting in increased HWC, due to conservancy activities. This perception affects the extent to which people will continue to support the conservancy initiative. The materials presented above illustrate that there are differences between Kunene and Caprivi in terms of the impact of incidents of wildlife conflict, and that it is a complex problem with no single and easy solution.

The impact of HWC is also affected by the extent to which other factors reduce household security. Drought years, for example, will exacerbate or compound the problem. Any analysis of HWC must take this into consideration. In addition households suffer losses to crops and livestock through problems incurred as a result of damage caused by domestic stock and by invertebrate and other pests. It is important to assess the relationship between overall losses and those attributable to wildlife specifically.

Living with wildlife and suffering the costs is a central concern for conservancy residents. Discussion surrounding the issue can often be raised to an emotional level, and it is therefore difficult without systematic research and cross-verification to estimate the costs incurred at household level. This chapter has not attempted to provide an all embracing analysis, rather it has provided an overview of key issues and presented the findings of primary and secondary research to contribute to ongoing efforts to address HWC by conservancies and CBNRM support organisations. The following recommendations build on current initiatives and provide some practical ideas to improve these.

A general recommendation that confirms the work of others dedicated to improving HWC impacts is that the best solution to a complex problem is to address it from a multi-dimensional perspective. This recognises that different species cause different kinds of damage with different outcomes, and that these vary not only between regions within Namibia but also between conservancies and households within conservancies. Recognition that some people are more severely affected than others, and seeking to find solutions that are equitable is important in maintaining the support of local communities in addressing HWC. An approach is needed that is both multi-dimensional and involves multi-stakeholder groups. Such an approach must simultaneously address both cause and symptoms.

Effective management solutions require a combination of monitoring and research, deterrents (fences, scaring and sometimes destroying animals), decoys (building dams and waterpoints), appropriate policy and legislation (allowing those who suffer the costs and have to deal with practical management the authority to act), and measures that maintain confidence and support of local people (addressing the symptoms). Combining these measures, and monitoring and

adjusting approaches situationally will provide the most effective means to manage HWC. Recognition that there is no ultimate solution except through the separation of human and wildlife areas is important. What is important in the context of conservancy objectives (conservation and development) is to ensure that the cost of HWC does not exceed people's minimal tolerance for living with wildlife. Ensuring that any benefits can outweigh the costs is a longer-term objective.

The participation of conservancy members and householders is central to effective management. Agreeing the location of dams, fences and accepting some responsibility for the maintenance of such installations are important aspects of local participation. Addressing these creates not only a sense of ownership, but also pride and confidence when the management proves effective. In addition offsetting costs (both direct and indirect) in tangible ways is paramount.

The measure that is likely to have a high degree of success in terms of offsetting the costs from the perspective of households themselves is through the further development of the current pilot compensation scheme (Human Animal Conflict Compensation Scheme (HACCS)). But this must be combined with other management approaches. Compensation alone is no panacea.

### **Achieving effective management**

Recommendations associated with achieving effective management include the following:

- Develop an integrated multi-stakeholder and multi-dimensional strategy to deal with HWC. This should be specific to each region or district and should involve representatives from the conservancies and traditional authorities and representatives from the broader conservancy membership. Technical staff from MET and conservancy NRM staff, together with technical staff from other line ministries (MAWRD, with veterinary services and DRWS), should also be involved. A forum similar to the CBNRM working group that exists in Caprivi would be ideal. The functions of the group should include establishing an inventory, description and assessment of current deterrent and mitigation practices. From this a suite of measures could be designed appropriate to each conservancy.
- Specific to water installations, the following should be adopted as principles:
  1. For each installation agree area of responsibility in terms of ownership, maintenance and the costs with stakeholders.
  2. Ensure financial assistance to pump water for elephants is maintained (either subsidising the costs of diesel, or purchase and installation of solar pumps).